VOL. 597, NOS. 1+2 JOURNAL OF CHROMATOGRAPHY APRIL 24, 1992

CONTENTS

9TH INTERNATIONAL SYMPOSIUM ON AFFINITY CHROMATOGRAPHY AND BIOLOGICAL RECOGNITION, YOKOHAMA, SEPTEMBER 24–28, 1991

Preface
by S. Ishii 1

Trypsin and affinity chromatography (Review)
by K. Kasai (Kanagawa, Japan) 3

Galactosylation as a tool for the stabilization and immobilization of proteins (Review)
by J. Turková, S. Vohník, Š. Helusová, M. J. Beneš and M. Tichá (Prague, Czechoslovakia) 19

Interactions and uses of antisense peptides in affinity technology (Review)
by I. Chaiken (King of Prussia, PA, USA) 29

Cellulose bearing covalently linked copper phthalocyanine trisulphonate as an adsorbent selective for polycyclic compounds and its use in studies of environmental mutagens and carcinogens (Review)
by H. Hayatsu (Okayama, Japan) 37

Study of high-affinity interactions by quantitative affinity chromatography. Analytical expressions in terms of total ligand concentration
by D. J. Winzor and P. D. Munro (Brisbane, Australia) and C. M. Jackson (Detroit, MI, USA) 57

Recent developments in quantitative affinity chromatography (Review)
by D. J. Winzor (Brisbane, Australia) 67

Computer simulation of weak affinity chromatography
by M. Wikström (Lund, Sweden) and S. Ohlson (Logan, UT, USA) 83

Base-atom recognition in protein adsorption to alkyl agaroses
by H. P. Jennissen and A. Demiroglou (Essen, Germany) 93

Avid AL, a synthetic ligand affinity gel mimicking immobilized bacterial antibody receptor for purification of immunoglobulin G
by T. T. Ngo and N. Khatter (Tustin, CA, USA) 101

Immobilized lectin columns: useful tools for the fractionation and structural analysis of oligosaccharides (Review)
by A. Kobata and T. Endo (Tokyo, Japan) 111

Immobilization of protein ligands with methyl vinyl ether–maleic anhydride copolymer
by K. Isosaki, N. Seno, I. Matsumoto, T. Koyama and S. Moriguchi (Tokyo, Japan) 123

Affinity purification of proteins using expanded beds
by H. A. Chase and N. M. Draeger (Cambridge, UK) 129

Immobilized ferredoxins for affinity chromatography of ferredoxin-dependent enzymes
by N. Sakihama, K. Nagai, H. Ohmori, H. Tomizawa, M. Tsujita and M. Shin (Kobe, Japan) 147

Membrane-based receptor affinity chromatography
by M. Nachman (Nutley, NJ, USA), A. R. M. Azad (Marlborough, MA, USA) and P. Bailon (Nutley, NJ, USA) . . 155

Kinetic aspects of membrane-based immunoaffinity chromatography
by M. Nachman (Nutley, NJ, USA) 167

Short-cut method for predicting the productivity of affinity chromatography
by S. Yamamoto and Y. Sano (Ube, Japan) 173

Arginine-tail method, an affinity tag procedure utilizing anhydrotrypsin agarose
by J. Hirabayashi and K. Kasai (Kanagawa, Japan) 181

Novel affinity separations based on perfluorocarbon emulsions. Use of a perfluorocarbon affinity emulsion for the purification of human serum albumin from blood plasma in a fluidised bed
by G. E. McCreath, H. A. Chase, D. R. Purvis and C. R. Lowe (Cambridge, UK) 189

Improved affinity chromatographic purification of D-mannose–N-acetyl-D-glucosamine-specific lectin from the bark of *Sophora japonica* eliminating the loss by sugar specific self-aggregation
by M. Ueno, T. Arai, K. Kojima, H. K. Ogawa, I. Matsumoto and N. Seno (Tokyo, Japan) 197

Selective clean-up method using an immunoaffinity column following radioimmunoassay of prostaglandin $F_{2\alpha}$ in biological fluids
by Y. Murai, M. Ohno, M. Konishi and G. Kominami (Osaka, Japan) 201

Isolation and characterization of isolectins from *Erythrina variegata* seeds
by N. Yamasaki, M. Kimura, O. Yamaguchi and M. Araki (Fukuoka, Japan) 207

Purification and characterization of carbohydrate-binding peptides from *Lotus tetragonolobus* and *Ulex europeus* seed lectins using affinity chromatography
by Y. Konami, K. Yamamoto and T. Osawa (Tokyo, Japan) 213

Determination of the carbohydrate-binding site of *Bauhinia purpurea* lectin by affinity chromatography
by K. Yamamoto, Y. Konami and T. Osawa (Tokyo, Japan) 221

Evaluation of the mode of binding of immunoglobulin to activated agarose
by W. H. Scouten, C. M. Adler, R. Rongen and L. Mallee (Waco, TX, USA) 231

Use of antibody fragments in immunoaffinity chromatography. Comparison of FV fragments, VH fragments and paralog peptides
by M. J. Berry and J. Davies (Sharnbrook, UK) 239

Affinity chromatographic purification of immunoglobulin M antibodies utilizing immobilized mannan binding protein
by J. R. Nevens, A. K. Mallia, M. W. Wendt and P. K. Smith (Rockford, IL, USA) 247

Affinity purification of antibodies using immobilized FB domain of protein A
by B. Solomon, O. Raviv, E. Leibman and G. Fleminger (Tel-Aviv, Israel) 257

Calcium-modulated conformational affinity chromatography. Application to the purification of calmodulin and S100 proteins
by G. Fleminger, T. Neufeld, M. Star-Weinstock, M. Litvak and B. Solomon (Tel Aviv, Israel) 263

High-performance affinity chromatography system for the rapid, efficient assay of glycated albumin
by K. Yasukawa (Kawasaki-shi, Japan), F. Abe (Tokushima-shi, Japan), N. Shida, Y. Koizumi, T. Uchida and K. Noguchi (Kawasaki-shi, Japan) and K. Shima (Tokushima-shi, Japan) 271

Artificial immunoglobulin G-binding protein mimetic to staphylococcal protein A. Its production and application to affinity purification of immunoglobulin G
by Y. Kihira and S. Aiba (Nagahama-shi, Japan) 277

Purification of sufficiently γ-carboxylated recombinant protein C and its derivatives. Calcium-dependent affinity shift in immunoaffinity and ion-exchange chromatography
by K. Ohsawa, M. Kimura, K. Kurosawa-Ohsawa, M. Takahashi, M. Koyama, Y. Abiko, K. Hirahara, T. Matsuishi and S. Tanaka (Kawagoe, Japan) 285

Interaction of amphipathic model lipopeptides with phospholipid bilayers
by S. Ono, T. Kato, S. Lee, H. Aoyagi and M. Ohno (Fukuoka, Japan) 293

Purification and partial characterization of phospholipase A_2 isoforms from human placenta
by L. M. Jordan (Greensboro, NC, USA) and F. Russo-Marie (Paris, France) 299

Preparation of immunoaffinity mini-columns for the analysis of platelet activating factor (PAF) in biological samples
by M. Watanabe (Miyagi, Japan and Waltham, MA, USA), T. Watanabe, N. Hirasawa and S. Mue (Miyagi, Japan), S. Muramatsu, Y. Matsushita and H. Takahagi (Tokyo, Japan), P. Braquet and C. Broquet (Le Plessis Robinson, France), L. Levine (Waltham, MA, USA) and K. Ohuchi (Miyagi, Japan) 309

Immunoenzymatic assay of dyes currently used in affinity chromatography for protein purification
by P. Santambien, P. Girot, I. Hulak and E. Boschetti (Villeneuve La Garenne, France) 315

Affinity purification and affinity characterization of carbohydrate-binding proteins in bovine kidney
by K. Kojima, H. K. Ogawa, N. Seno and I. Matsumoto (Tokyo, Japan) 323

Affinity chromatographic purification of bovine lung endothelin receptor using biotinylated endothelin and avidin–agarose
by H. Hagiwara, T. Nagasawa, K. M. Lodhi, M. Kozuka, T. Ito and S. Hirose (Tokyo, Japan) 331

Affinity chromatography in purification of A_1 adenosine receptors
by H. Nakata (Tokyo, Japan) 335

Analysis of the interaction between α(1→6)dextran-specific mouse hybridoma antibody and dextran B512 by affinity electrophoresis
by Y. Mimura, K. Nakamura and K. Takeo (Ube, Japan) 345

Characterization of the interaction between human plasma fibronectin and collagen by means of affinity electrophoresis
by K. Nakamura, S. Kashiwagi and K. Takeo (Ube, Japan) 351

Immobilized metal ion affinity electrophoresis. A study with several model proteins containing histidine
by H. Goubran-Botros, E. Nanak and J. Abdul Nour (Compiègne, France), G. Birkenmeir (Leipzig, Germany) and M. A. Vijayalakshmi (Compiègne, France) 357

Separation of monoclonal antibodies from antihapten antisera by two-dimensional affinity electrophoresis
by K. Takeo, K. Nakamura and R. Suzuno (Ube, Japan) 365

Determination of the association constant of monovalent mode protein–sugar interaction by capillary zone electrophoresis
by S. Honda, A. Taga, K. Suzuki, S. Suzuki and K. Kakehi (Higashi-osaka, Japan) 377

Process monitoring by flow-injection immunoassay. Evaluation of a sequential competitive binding assay
by M. Nilsson, H. Håkanson and B. Mattiasson (Lund, Sweden) 383

Mapping of viral epitopes with conformationally specific monoclonal antibodies using biosensor technology
by M.-C. Dubs, D. Altschuh, M. H. V. Van Regenmortel (Strasbourg, France) 391

Biospecific interaction analysis using surface plasmon resonance detection applied to kinetic, binding site and concentration analysis
by L. G. Fägerstam, Å. Frostell-Karlsson, R. Karlsson, B. Persson and I. Rönnberg (Uppsala, Sweden) 397

Occurrence of an allosteric transition in the modification of papain with L-1-acetyl-2,3-dihydropyrrolo[2,3-*b*]indole-2-carboxamide
by A. Nagatomo, K. Sakai, T. Nose, Y. Shimohigashi and M. Ohno (Fukuoka, Japan) 411

Specific assay for endotoxin using immobilized histidine, *Limulus* amoebocyte lysate and a chromogenic substrate
by M. Nawata, S. Minobe, M. Hase, T. Watanabe, T. Sato and T. Tosa (Osaka, Japan) 415

Discriminative affinity labelling of opioid receptors by enkephalin and morphiceptin analogues containing 3-nitro-2-pyridinesulphenyl-activated thiol residues
by Y. Shimohigashi, K. Takada, H. Sakamoto and H. Matsumoto (Fukuoka, Japan), T. Yasunaga and M. Kondo (Saga, Japan) and M. Ohno (Fukuoka, Japan) 425

Purification and reconstitution of μ-opioid receptors in liposome
by T. Fujioka, F. Inoue, S. Sumita, M. Kuriyama, T. Hanawa and T. Katagi (Nishinomiya, Japan) 429

Use of various types of column reactors for flow-injection analysis
by M. Tabata and T. Murachi (Kyoto, Japan), J. Endo (Shimane, Japan) and M. Totani (Tokyo, Japan) 435

Non-isotopic receptor assay for benzodiazepines using a biotin-labeled ligand and biotin-immobilized microtiter plate
by S. Tanaka, T. Takeuchi and G. A. Rechnitz (Honolulu, HI, USA) 443

Author Index 449